

REMARKS

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

Claims 15-51 are presently pending. Claims 1-14 remain pending, but are currently withdrawn from consideration.

INTERVIEW SUMMARY

Applicant thanks the Examiners for granting the in-person interview on August 2, 2007. At that interview, Applicant's representative, Tyson Winarski, discussed the Teo reference with the Examiners and explained that it does not disclose the process of writing servo frames onto media, as claimed by Applicant. At the interview, Applicant's representative explained that Teo only discloses the reading and writing of data sectors on media that is already configured to have servo frames. Thus, Teo fails to disclose anything related to the writing of servo frames, as recited in Applicant's claims. The Examiners rejected this and maintained their position that the definition of a servo frame can encompass a data sector. Since Teo discloses a method of writing data sectors, which the Examiners asserted is within the meaning of the term servo frame, the Examiners maintained that Teo discloses a method of writing servo frames, as recited by Applicant. The Examiners stated that if the claims were amended to recite that a servo frame is a reference as to the location of a data sector, they would consider the amended claims to be patentability distinct over Teo.

PRIOR ART REJECTIONS UNDER 35 U.S.C. §102(B):

Claims 15-51 were rejected under 35 U.S.C. §102(b) over U.S. Patent Publication 2003/0002190 to Teo, et al. (hereinafter "Teo").

Applicant traverses the rejection on the grounds that Teo does not constitute a §102(b) reference with respect to the present application. The present application claims priority to the U.S. Provisional Application 60/442,156 filed on January 24, 2003. Since Teo was published on January 2, 2003, a mere 22 days before the filing of the provisional application to which the present application claims priority, Teo fails to meet the more than one year requirement outlined for prior art in 35 U.S.C. §102(b).

Applicant's claims are directed toward a method of writing servo frames to a storage medium. The present rejection centers on the meaning of the term "servo frame." The term

“servo frame” is a technical term of art that has a very specific meaning to a person of ordinary skill in the art. To a person of ordinary skill in the art, in the context of disk drives, for example, a servo frame is a master reference that is used by the disk drive during normal operation in order to locate the tracks on sectors on the disk for data storage and retrieval. The servo frames are written on a once-only basis as an almost final step in manufacture of a disk. The servo frames are *permanently* recorded on the disk and are never changed. Highly sophisticated equipment is required to write servo tracks.

A servo frame is not a data sector. A servo frame is different from a data sector. A servo frame allows the read/write head of a disk drive to be located relative to the disk and therefore to the data sectors. For instance, if a disk is being formatted, the servo frames are used by the disk drive during the formatting process to locate the head over the disk. The servo frames are not affected by the formatting process. In fact, the servo frames need to be present when formatting the disk in order for the disk drive to function and perform the formatting process.

This definition of servo frame used by the person of ordinary skill in the art and used by the Applicant in the claims currently pending is also used by Teo cited in the Office Action. Teo discloses that modern disk drive architectures generally utilize an embedded servo system in which each data track is divided into a number of data sectors which are associated with a series of servo frames; see Teo paragraph 0054 and 0055. Teo itself makes it perfectly clear that data sectors are different from servo frames.

The Examiners, both in the Office Action and at the in-person interview, have applied a very different definition of the term servo frame than that used by the person of ordinary skill in the art, Teo and the current Applicant. The Examiners maintain that as a medium is written to and read from by a read/write head that is operated by a servo mechanism, a servo frame is any region on the medium including data sectors and regions that designate the location of a data sector. To the Examiners, as a servo operated read/write head reads and writes data sectors, a data sector is a servo frame because of the function of the servo mechanism. This definition of servo frame outright flies in the face of the disclosure of Teo and the convention of persons of ordinary skill in the field of storage media.

Nowhere does Teo ever use the term servo frame to generically designate data sectors and servo frames. Teo makes it unambiguously clear that data sectors are not servo sectors. Teo is explicit in stating that servo frames and data sectors are different structures on storage media that perform different functions.

Teo discloses a disk drive with optimized read gate delay. Teo discloses a sequence of events for writing data to a data sector following a servo frame 32; see Teo paragraph 60. In Teo, the servo frame is already written onto the media. Teo discloses the reading and writing of data from and to a data sector only. Teo is wholly silent as to the process of writing servo frames onto media, as recited by Applicant's claims. The reading and writing of data is an operation that is completely different from writing servo frames to a storage medium such as a disk drive. In the exemplary embodiment of the storage medium being a disk drive, servo frames provide a master reference on a disk that is used by the disk drive during normal operation to locate the tracks and sectors on the disk for data storage and retrieval. A disk is completely blank and devoid of any structure or information prior to the writing of servo frames. Only after the servo frames are written can the read/write data operations in data sectors occur as discussed in Teo. In Teo, servo frames 32 are already written. Teo discloses a sequence for locating the servo frames 32 and then writing data onto the disk in the data sectors identified by the servo frames 32; see Teo paragraph 0060. Teo is wholly silent as to any process for writing servo frames onto blank disks. Nowhere does Teo ever discuss where servo frame 32 came from. Thus, Teo does not disclose a process for writing servo frames as claimed by Applicant. Applicant therefore respectfully requests the reconsideration and withdrawal of this rejection and allowance of all claims.

At the in-person interview, the Examiners stated that they would withdraw the current prior art rejection over Teo if Applicant amended the claims to recite that the servo frame is a reference as to the location of a data sector. Applicant should not have to amend the claims to define a technical term of art to have its ordinary and customary meaning as used by persons of ordinary skill in the art.

The Examiners are also reminded that the independent claims of the present application concerned already specifically claim specific features relating to servo frames. For example, feature (B) of claim 15 specifically requires “writing a complete full width logic field of a servo frame”, feature (C) of claim 15 specifically requires “writing a first portion of the position field of said servo frame”, etc. User data stored on a disk, including the user data 26 in Teo, do not have logic fields nor position fields. Contrary to the Examiner’s objection in the Office Action dated May 17, 2007, nowhere does Teo disclose writing a logic field of a servo frame or a position field of a servo frame. By way of example only, with particular regard to the Examiner’s objection that feature (B) of claim 15 is disclosed in Teo, as noted above, in Teo, the servo frame 32 has already been written and

therefore Teo does not disclose writing a logic field of a servo frame. With regard to the Examiner's objection that feature (C) of claim 15 is disclosed in Teo, as noted above, in Teo, the servo frame 32 has already been written and therefore Teo does not disclose writing a position field of a servo frame. Moreover, again by way of example only, with regard to the Examiner's objection that feature (C) of claim 15 is disclosed in Teo, the Examiner asserts that this feature is disclosed in Teo by virtue of Teo "writing PLL field 28" in Figure 8. However, a study of Fig. 8 and paragraphs 61 and 65 of Teo show that this is not correct. Fig. 8 and paragraphs 61 and 65 of Teo clearly show that the PLL field 28 is different from the servo frame 32. Indeed, as explained in paragraphs 61 and 65 of Teo, the PLL field 28 is used to allow the disk drive controller to lock onto the correct frequency to read the user data 26 correctly. As is well known to the person of ordinary skill in the art, this frequency-locking is a common use of phase locked loops (PLLs) and therefore the PLL field 28 of Teo has nothing whatsoever to do with the usage of the servo frames 32 to locate the read/write head relative to the user data 26.

For all of the foregoing reasons, Teo does not disclose all elements of Applicant's claimed invention, and therefore is not a proper basis for a §102 rejection thereof. Nor is there any disclosure or teaching in Teo that would have suggested Applicant's claimed invention to one of ordinary skill in this art. Thus reconsideration and withdrawal of this rejection, and allowance of all 15-51 is respectfully requested.

Further, along with the allowance of all claims 15-51, Applicant respectfully requests that claims 1-14 be removed from withdrawn status and be made pending in the current application and examined along with the claims currently under consideration in the present application. Claims 1-7, like claim 15, are directed toward a method for writing servo frames to tracks of a storage medium. Claims 8-14, like claim 22, are directed toward an apparatus for writing servo frames to tracks of a storage medium. Applicant maintains that claims 1-14 and claims 15-51 are all directed toward a single invention. Examination of claims 1-14 will not place any further burden on the Patent Office as the USPTO will not have to perform any further search for prior art to consider claims 1-14. Thus, Applicant respectfully requests that claims 1-14 be removed from withdrawn status and be made pending in the current application and examined along with claims 15-51 in the present application.

CONCLUSION:

All matters having been addressed and in view of the foregoing, Applicant respectfully requests the entry of this paper, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.

Applicant's representative remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975 (Ref. No. 011765-0307460). The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,



PILLSBURY WINTHROP SHAW PITTMAN LLP
Tyson York Winarski
Reg. No. 41381
Tel. No. 202.663.8248
Fax No. 202.663.8007

Date: August 16, 2007
P.O. Box 10500
McLean, VA 22102
(703) 770-7900